[redacted]

File P-99a

Hold action for arrival. [redacted]
File in Time Sig. Radio file

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27 May 1954

[redacted]

MEMORANDUM FOR: THE RECORD

SUBJECT: Meeting with Dr. William D. George at the National Bureau of Standards in Conjunction with P-99, Radio, Time Signal

1. Time and Place of Meeting: The meeting was held at 0900 on 25 May 1954 at the Radio Building of the National Bureau of Standards (NBS) in Washington, D. C.

2. Attendance: Dr. William D. George, NBS
[redacted] [redacted], TSS/APD STAT 50X1

3. Purpose: The purpose of this meeting was to consult with Dr. George on problems relating to the construction of an optimum Time Signal Radio.

4. Background Information:

[redacted] has been associated with the problem of the target locations aids kit inasmuch as it was he that constructed the kit for [redacted] under contract from TSS/APD. Since he has a working knowledge of the surveying methods used in the kits, he is particularly qualified to know the relative importance of the many controlling factors which are used to compute one's location with the target location aid kits. The Time Signal Radio has been used to obtain a time standard from which a chronometer is accurately set to the correct time. The radio is also used to provide a standard against which the chronometer error may be computed. STAT 50X1

5. Discussion:

Dr. George feels that a radio receiver which is to be used to receive time signals on a world-wide basis should have the following characteristics:

a. Tunable to the 5, 10, and 15 mc time signal broadcast frequencies.

b. Sensitivity of 1 microvolt.

c. Vertical antenna wire of 10 to 30 feet.

d. Narrow band tuning.

In addition, he feels that the listener should be supplied with a list of the programming procedures for the various time signal broadcasts since the way in which the time is presented on these broadcasts is not the same in all instances.

The problem of time signal radio broadcasting failures was discussed as was the problem of the time signal radio broadcast which lasts only 5 minutes each day. These two phenomena indicate, along with the problem of reliable continuous reception, that there are advantages to making field measurements with an accurately set chronometer whose error has been determined by a time signal radio at the home base. If such a system were adopted the time signal radio would not necessarily have to be battery operated. [redacted] pointed out that this approach will give comparably accurate results in the field. The idea of using a time signal radio when the surveying measurements are being made was originally adopted for the sake of convenience in using the kits. In addition, [redacted] pointed out that manipulation of the stop watch and measuring film image distances is many times more critical a factor than the use of a Time Signal Radio when measurements are being made. STAT STAT

6. Actions:

The importance and necessity of having a Time Signal Radio in each Target Locations Aids Kit should be discussed with the idea of determining what type of Time Signal Radio should be included in the kits which have no radios as yet. Perhaps it would be best to discuss this as soon as [redacted] enters on duty with TSS/APD. STAT

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TSS/APD

Distribution:
Orig. - P-99A File
1 - P-99B File
1 - Chrono
[redacted] STAT